

Attorney Docket No.: 5315

421
W. Lamon
PATENT
1/30/04

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: John S. HENDRICKS, et al.

Examiner: A. Koenig

Serial No.: 09/162,768

Art Unit: 2611

Filed: September 30, 1998

For: AUDIO PROGRAM RECEPTION TERMINAL FOR TELEVISION
DELIVERY SYSTEM

Mail Stop: AF
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

AFFIDAVIT UNDER RULE 1.132

I, Mike Asmussen, being duly sworn, do hereby depose and say as follows:

1. I received a BS degree in electrical engineering from the University of Maryland in 1985. In the past 18 years, I worked as an engineer at Booz, Allen & Hamilton, Inc. and GTE Spacenet / Contel ASC, and as Director of Engineering and Development at Discovery Communications and Your Choice TV. I currently hold the position of Vice President at Skjei Telecom. I have extensive experience in the field of telecommunications and am particularly skilled in satellite communications and cable TV program network engineering. I have published in several technical journals including the *National Association of Broadcasters Technical Proceedings*. I have been a member of the National Cable TV Association's Technical Engineering Committee, the Society of Satellite Professionals International, the Society for Cable Telecommunication Engineers, and IEEE. My working experience is described in more detail in Exhibit 1.

2. I have reviewed the above-identified patent Application, the pending claims, and the Office Action mailed on July 31, 2003. Specifically, I have studied the signal transmission

mechanism between the set-top terminal and the hardware upgrade, as described in the specification and Figure 12b.

3. My understanding is that the signal transmitted between the set-top terminal and hardware upgrade is likely to be a hybrid (modulated and baseband digital) signal. It is my opinion that an appropriately configured multi-pin connector as referenced in claims 17 and 18 could support such a hybrid signal. For example, there exist multipin connectors that support digital as well as modulated signals, as is shown in Exhibits 2 and 3. The interface defined by the products in Exhibits 2 and 3 would be suitable for the transmission of both (a) baseband digital signals between the set-top terminal microprocessor 602 and the hardware upgrade microprocessor 132, and (b) modulated signals up to 2 GHz via the inclusive coaxial interface circuit contained in the connector. It is also my opinion that the technologies employed in the multipin connectors shown in Exhibits 2 and 3 were available in 1993, and that one skilled in the art would be able to configure such connectors for the purpose of transmitting modulated digital signals in early 90's.

4. I declare that all statement made herein based on my own knowledge are true, and that all statements made herein based on information and belief are believed to be true. I further declare that these statements are made with the knowledge that willful false statements are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United State Code, and that willful false statements may jeopardize the validity of the above-referenced patent application and any patent that issues therefrom.

Date: 10/30/03

Michael Asmussen
Michael Asmussen

Michael Asmussen

Mr. Asmussen has more than 18 years of experience in the field of telecommunications. He is skilled in Satellite Communications, Cable TV Program Network Engineering and Operations, Project and Vendor Management, Strategic Technology Evaluation, and Marketing and Business Development.

While with Skjei Telecom, Mr. Asmussen has supported numerous clients in the digital video and audio broadcast arenas. In support of Your Choice TV, he served as the primary architect of a digital video satellite distribution system, providing pay per view programming and addressable advertising services nation-wide. He has supported BBC America's head of Operations in the research / resolution of various technical issues. For PBS, Mr. Asmussen has performed an extensive analysis into PBS's needs as they transition their current broadcast and cable programming offerings to an SDTV and HDTV digital environment. For the California State University system, he was responsible for the specification and design of a video production, playback, and digital video satellite broadcast facility for a multi-channel, distance learning application. In support of the development of a Turnkey DTH Broadcast Center System for the government of India, he supported the specification and design of a digital video satellite broadcast facility, which included both tape based and file server based playback, and incorporated both satellite network and terrestrial network feeds. His support ensured the successful launch of several clients' digital audio broadcast services. For a domestic DARS client, he served as the primary technical architect involved in the specification, design, development, and implementation of the overall conditional access & encryption management systems responsible for managing all subscription-based audio services. For one worldwide digital satellite service provider, he served as the key engineer in the successful implementation of a subscriber management and advertising sales / traffic management system for their subscription-based audio and multimedia services.

Prior to joining Skjei Telecom, Mr. Asmussen served as Director of Engineering and Development at Discovery Communications and Your Choice TV, where he oversaw the design, implementation, and operation of eleven channels of digitally delivered and one channel of analog delivered cable programming. His responsibilities encompassed all engineering activities necessary to deploy video / audio / data services into numerous distribution architectures and video file server deployments. He was also responsible for the development of all business support systems necessary to manage Your Choice TV's tactical operations and strategic planning initiatives. His involvement was critical in ensuring the successful engineering test and commercial launch of Discovery's newly launched Animal Planet cable network, the cable industry's fastest growing network ever.

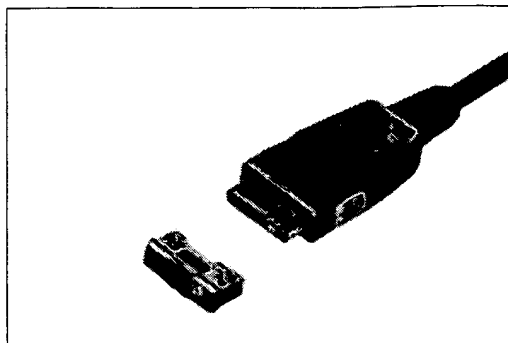
At GTE Spacenet / Contel ASC, Mr. Asmussen was responsible for systems engineering and development of Compressed Digital Video Products. His responsibilities included requirement specification, system design, vendor management, system implementation,

and customer training. As part of the development process, he analyzed competing technologies and vendors in the digital video and audio marketplace. He was also active in product marketing and technical sales support. In the area of Satellite Data Communications, he was the primary product engineer for several VSAT product lines including both broadcast and two communications systems. His experience spanned numerous delivery technologies including CDMA, TDMA, and FDM and supported applications including data, telephony, facsimile, video, and audio.

While at Booz, Allen & Hamilton, Inc., Mike managed a team of engineers who designed, evaluated, and tested satellite network communication protocols. He also developed several computer simulations which modeled network protocols and used the simulations to optimize protocol design and performance.

Mike possesses a BSEE from the University of Maryland, where he graduated Magna Cum Laude in 1985, and he has an MBA from Virginia Tech. Mr. Asmussen has also been published in several technical publications including the *National Association of Broadcasters Technical Proceedings*. He has served as a member of the National Cable TV Association's Technical Engineering Committee, a member of the Society of Satellite Professionals International, a member of the Society for Cable Telecommunication Engineers, and a member of IEEE. He has earned many awards including the 1994 GTE Warner Award for Technical Achievement.

Multi Pin Connector with Coaxial, DI-1 Series



■ Features

1. The coaxial terminal is provided with a coaxial switch, covering a working frequency range of DC to 2GHz.
2. The connector has a receptacle mountable on a plane and suitable for high-density mounting.
3. Size and weight, SMT system and mounting method may be custom-designed.

■ Specifications

1. Operating Temperature Range : -40°C to $+85^{\circ}\text{C}$
2. Operating Frequency Range : DC to 2GHz
3. Characteristic Impedance: 50Ω
4. V.S.W.R. : 1.35 max.
5. Insertion Loss : 0.5dB max.
6. Operation Life : 5,000 cycles

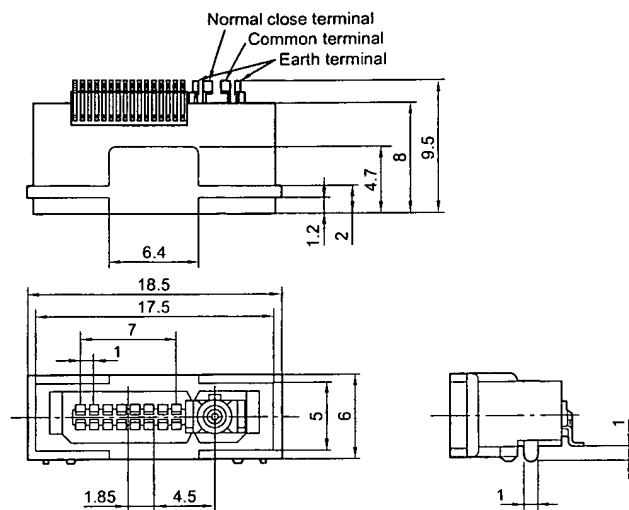
■ Material and Plating

- Housing : Thermoplastic (Black) 94V-0
- Contact : Copper Alloy, Selective Gold Plating

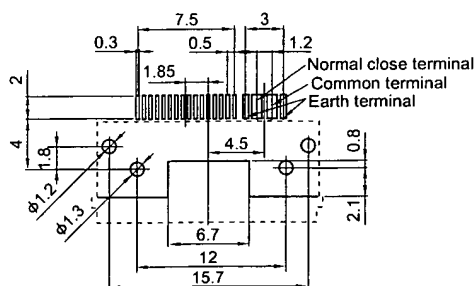
■ Note

A key slot is added per customer series to ensure non-compatibility.

● Receptacle CSS 5016-0501

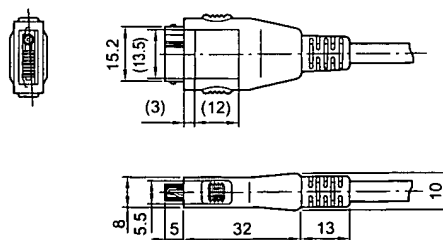


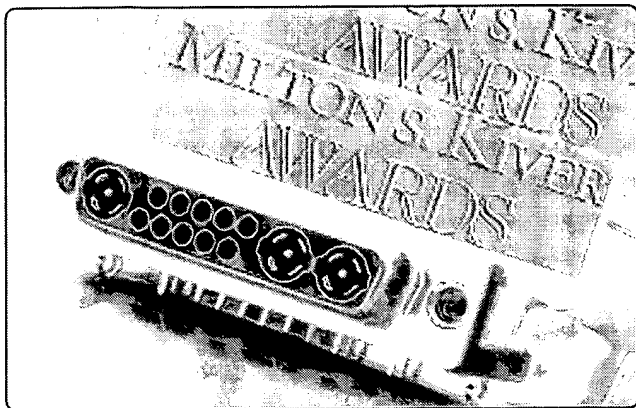
■ Applicable Board Pattern



(Tolerance ± 0.05)

● Plug CSC 1016-0401





K100 Series Composite Coax D Connector

Features

- Coax/Signal D Subminiature Combination Connector 10 Signal Contacts, 3 Coax Contacts
- K100-Series Connector Combines the R-G-B or Gray Scale Graphics Signals in One Connector
- For New Generation Engineering Workstations Requiring 75 Ohm Signal Impedance
- Board Locks

Performance Specifications

Materials and Finish

Body

UL94V-0 Rated 30% Glass Filled Polyester

Shell

Steel, Tin Plated

Signal Contacts

Phosphor Bronze, 0.000015 Gold Plating Over 0.000050 Nickel

Coaxial Contacts

Insulator: Acetal (Plastic Steel)

Inner Conductor: Brass, 0.000050 Gold Plated Over Nickel

Outer Shell: Phosphor Bronze

Electrical Characteristics

Contact Rating

Signal Contact: 5.0 Amps

Coaxial Contact: 1.5 Amps

Impedance

75 Ohm

Contact Resistance

13 Milliohms Max.

Insulation Resistance

5000 Megohms Min.

Dielectric Strength

1000 V AC Min. for 1 Minute

Temperature Rating

-55°C to +105°C

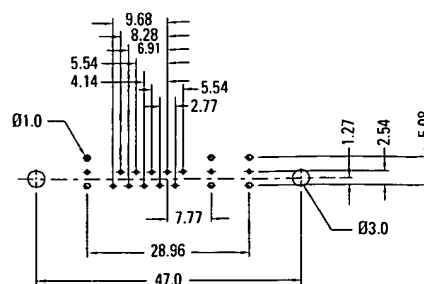
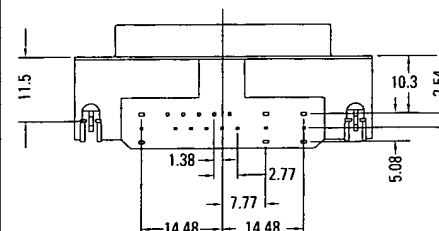
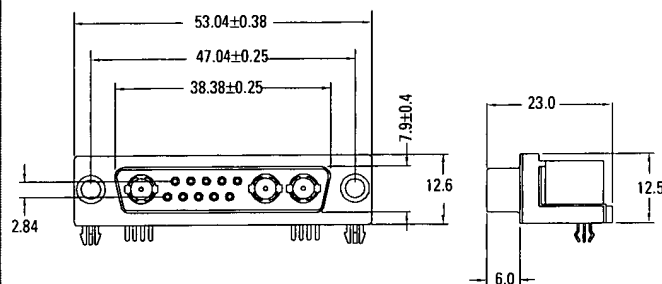
D-SUBMINIATURE CONNECTORS

K100 Series

Ordering Information

K100	-	J13W3	-	N
Series		Contact Arrangement		Mounting Options
Series K100 - Kycon Coax Combination Connectors				
Contact Arrangement J13W3 - Ten Signal Contacts and Three Size 8 Coaxial Contacts				
Mounting Options N: Grounding Board Lock, Riveted Threaded Inserts				

K100 Series Dimensions



Recommended PCB Layout
(Top View)

Dimensions in mm